

October 25, 2002

Certified Mail 8156 0790

Robert Wille
Customer Service Representative
ASF-Keystone, Inc. – Hammond Plant
4831 Hohman Avenue
Hammond, Indiana 46327

Re: 089-16102-00204
First Administrative Amendment to
Part 70 Operation Permit (T089-8273-00204)

Dear Mr. Wille:

ASF-Keystone, Inc. – Hammond Plant was issued a Part 70 permit on July 29, 2002 for a coil springs manufacturing plant. A letter requesting a modification to that permit was received on September 25, 2002.

The request revises descriptive information where the revision will not trigger a new applicable requirement or violate a permit term. Two Spring Coating Dip Tanks are also being added – one using VOC-containing coating and one that does not (quench oil). The VOC-containing Dip Tank is considered Exempt because the Potential to Emit is below the permitting thresholds. Therefore, in accordance with 326 IAC 2-7-11, your Part 70 permit is hereby administratively amended as follows:

Proposed Changes:

The following changes were agreed to and made as the First Administrative Amendment for this source (~~strikeout~~ added to show what was deleted and **bold** added to show what was added):

1. On pages 10 and 11 of 62, Section A.2 – Emission Units and Pollution Control Equipment Summary, the heading description for Item (9) was revised to reflect the two units recently added – one using VOC-containing coating and one that does not (quench oil). The VOC-containing Dip Tank is considered Exempt because the Potential to Emit is below the permitting thresholds. The two new units are reflected in the new Item (e) below. Appendix A has been updated. The addition of the information on the two new units shifted some of the existing information to page 11.

(9) ~~Nine (9)~~ **Eleven (11)** Spring Coating Dip Tanks

This operation includes the following units:

- (a) Dip Coating Stations 3-2865 and 3-2813 (Location: By Final Inspection Area). These dip coating stations are used to apply a clear coat on finished springs. This coating is thinned with a mixture of water and glycol ether.
- (b) Dip Coating Station 2865A (Location: By old tumbler/shotpeener – Medium Spring Line Area). This station is used to apply a clear coat on finished springs. This coating is thinned with a mixture of water and glycol ether.
- (c) Dip Coating Stations 3-2867, 3-2868, and 3-2869 (Location: By Medium Magnaflux Area by the Torrington Grinder). 3-2867 is used to apply a clear coat thinned with a mixture of water and glycol ether. 3-2869 is used to apply a rust protectant on finished springs. 3-2868 is used to coat the springs with quench oil.
- (d) Dip Coating Stations 3-2870, 3-2871, and 3-2872 (Location: Large Magnaflux Area Northeast corner of the plant). 3-2870 is used to apply a clear coat thinned with a mixture of water and glycol ether on finished springs. 3-2871 holds rust preventative coating. 3-2872 holds quench oil.
- (e) **Dip Coating Stations 3-2873 and 3-2874 (Location: Fabrication Department). 3-2873 is used to apply a rust protectant on finished springs. 3-2874 holds quench oil.**

2. **On pages 47 and 48 of 62, Section D.9 – Facility Operation Conditions, the Facility Description Box for "Spring Dip Coating Operation" has been modified as follows to reflect the two units recently added. The two new units are reflected in the new Item (e) below. The addition of the information on the two new units shifted some of the existing information to page 48.**

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Spring Dip Coating Operation including the following dip tanks:	
(a)	Dip Coating Stations 3-2865 and 3-2813 (Location: By Final Inspection Area). These dip coating stations are used to apply a clear coat on finished springs. This coating is thinned with a mixture of water and glycol ether.
(b)	Dip Coating Station 3-2865A (Location: By old tumbler/shotpeener – Medium Spring Line Area). This station is used to apply a clear coat on finished springs. This coating is thinned with a mixture of water and glycol ether.
(c)	Dip Coating Stations 3-2867, 3-2868, and 3-2869 (Location: By Medium Magnaflux Area by the Torrington Grinder). 3-2867 is used to apply a clear coat thinned with a mixture of water and glycol ether. 3-2869 is used to apply a rust protectant on finished springs. 3-2868 is used to coat the springs with quench oil.
(d)	Dip Coating Stations 3-2870, 3-2871, and 3-2872 (Location: Large Magnaflux Area Northeast corner of the plant). 3-2870 is used to apply a clear coat thinned with a mixture of water and glycol ether on finished springs. 3-2871 holds rust preventative coating. 3-2872 holds quench oil.
(e)	Dip Coating Stations 3-2873 and 3-2874 (Location: Fabrication Department). 3-2873 is used to apply a rust protectant on finished springs. 3-2874 holds quench oil.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)	

3. **On page 6 of 62, Table of Contents, D.9 has been modified as follows to reflect the two units recently added.**

D.9 FACILITY OPERATION CONDITIONS - ~~Nine (9)~~ **Eleven (11)** Spring Coating Dip Tanks

4. **On page 10 of 62, Section A.3(3), Insignificant Activities, the combined capacity for the two slot furnaces was changed to 2.6 MMBtu/hr to correct a typographical error. Appendix A has been updated as well.**

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

(3) Slot Furnaces (Medium Line) (Unit Ids 2-5014 and 2-5015)

The slot furnaces are used to heat bar ends prior to tapering. These units have a combined maximum design capacity of ~~5.2~~ **2.6** MMBtu/hr heat input and are natural gas-fired only.

5. **On page 51 of 62, Section D.12, Facility Operation Conditions – Insignificant Activity, the Facility Description Box for "Slot Furnaces (Medium Line)" has been modified as follows to correct a typographical error:**

SECTION D.12 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Slot Furnaces (Medium Line) (Unit IDs 2-5014 and 2-5015) used to heat bar ends prior to tapering. These units have a combined maximum design capacity of ~~5.2~~ **2.6** MMBtu/hr heat input and are natural gas-fired only.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

6. **On page 15 of 62, Section B.11, Preventive Maintenance Plan, Item (d) was corrected as follows to correct a typographical error:**

~~(a)~~ (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or HDEM within a reasonable time.

7. **On page 44 of 62, Section D.7.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:**

D.7.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from this unit shall be limited to 0.003 lbs/MMBtu and ~~0.46~~ **0.03** lbs/hr. In addition, this unit shall fire natural gas only.

8. **On page 54 of 62, Section D.14.5, Parametric Monitoring, the acceptable pressure drop range for the Pangborn Shot Peener was revised from 3.0 to 6.0 "H₂O to 0.1 to 3.0 "H₂O to be consistent with the readings observed during normal operation of the unit.**

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the Pangborn Shot Peener at least once per shift when the Pangborn Shot Peener is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of ~~3.0 and 6.0~~ **0.1 and 3.0** inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports. A pressure reading that is outside of the above mentioned range for any one reading is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

9. **On page 56 of 62, Section D.15.5, Parametric Monitoring, the acceptable pressure drop range for the Wheelabrator Shot Peeners was revised from 3.0 to 6.0 "H₂O to 0.1 to 3.0 "H₂O to be consistent with the readings observed during normal operation of the units.**

D.15.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the Wheelabrator Shot Peeners at least once per shift when any one of the Wheelabrator Shot Peeners is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of ~~3.0 and 6.0~~ **0.1 and 3.0** inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports. A pressure reading that is outside of the above mentioned range for any one reading is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

10. **On page 33 of 62, Section D.1.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:**

D.1.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from this unit shall be limited to 0.003 lbs/MMBtu and ~~0.46~~ **0.062** lbs/hr. In addition, this unit shall fire natural gas only.

11. **On page 34 of 62, Section D.2.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:**

D.2.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from this unit shall be limited to 0.003 lbs/MMBtu and ~~0.46~~ **0.039** lbs/hr. In addition, this unit shall fire natural gas only.

12. **On page 49 of 62, Section D.10.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:**

D.10.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from this unit shall be limited to 0.003 lbs/MMBtu and ~~0.16~~ **0.024** lbs/hr. In addition, this unit shall fire natural gas only.

13. On page 50 of 62, Section D.11.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:

D.11.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from this unit shall be limited to 0.003 lbs/MMBtu and ~~0.16~~ **0.0075** lbs/hr. In addition, this unit shall fire natural gas only.

14. On page 51 of 62, Section D.12.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:

D.12.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from these units combined shall be limited to 0.003 lbs/MMBtu and ~~0.16~~ **0.008** lbs/hr. In addition, this unit shall fire natural gas only.

15. On page 52 of 62, Section D.13.1, Particulate Matter less than 10 microns in diameter (PM10), was corrected as follows to correct a typographical error:

D.13.1 Particulate Matter less than 10 microns in diameter (PM10)

Pursuant to 326 IAC 6-1-10.1 (Lake County PM10 Emission Requirements), subsection (h), emissions of particulate matter less than ten microns in diameter (PM10) from this unit shall be limited to 0.003 lbs/MMBtu and ~~0.16~~ **0.0045** lbs/hr. In addition, this unit shall fire natural gas only.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act IC 4-21.5-3-5. If you have any questions on this matter, please contact this Department at (219) 853-6306.

Sincerely,

**Lito Biscocho, Engineer
Hammond Department of Environmental Management
Air Pollution Control Division**

cc: Mindy Hahn, Permits Administration, IDEM-OAQ

ENCLOSURES

Appendix A: Emissions Calculations

Plant ID: 00204

Company Name: ASF-Keystone, Inc. - Hammond Plant

Address: 4831 Hohman Avenue, Hammond, Indiana 46327

Calculations By: Lito Biscocho, HDEM

* 1997 Actuals: As per the 1997 Emission Statement

Date: 10/10/02

Purpose: (1st AA) To reflect the addition of two (2) new Dip Coating Tanks and to correct typographical errors.

NOTES

EF: EMISSION FACTOR

MDR: MAXIMUM DESIGN RATE

Ts: STACK DISCHARGE TEMPERATURE

CE: CONTROL EFFICIENCY

MDC: MAXIMUM DESIGN CAPACITY

UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

Unit ID: 50-Ft. Bar Furnace (Unit ID 2-5027)

Manufacturer: Holcroft

MDC (mmBtu/hr): 20.5

HEAT CONTENT (Btu/cft): 1,050

(Natural Gas Combustion)

MDR (mmcft/hr): 0.0195

QTY BURNED (mmcft/yr): 39.32

CNTRL DEV: None

Installed: 1938

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-02			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS
POLLUTANT	EF(lbs/mmcf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	3	0	0.0586	1.4057	0.2565	0.0586	0.2565	#DIV/O!			0.0590	0.0590
PM10	3	0	0.0586	1.4057	0.2565	0.0586	0.2565	#DIV/O!	0.062	0.27	0.0590	0.0590
SOx	0.6	0	0.0117	0.2811	0.0513	0.0117	0.0513	N/A	0.012	0.051	0.0118	0.0118
NOx	140	0	2.7333	65.6000	11.9720	2.7333	11.9720	N/A			2.7524	2.7524
VOC	2.8	0	0.0547	1.3120	0.2394	0.0547	0.2394	N/A			0.0550	0.0550
CO	35	0	0.6833	16.4000	2.9930	0.6833	2.9930	N/A			0.6881	0.6881
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

Used to heat up whole bars prior to coiling.

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
 326 IAC 6-1-10.1(h) requires natural gas combustion only.
 Thus, the more stringent limitation for SO2 emissions
 inherent with natural gas combustion is the allowable.

Appendix A: Emissions Calculations

Unit ID: Medium Screw Furnace (Unit ID 2-5075)

Manufacturer: Flynn & Dreffin
(Natural Gas Combustion)

MDC (mmBtu/hr): 13
MDR (mmcft/hr): 0.0124

HEAT CONTENT (Btu/cft): 1,050

QTY BURNED (mmcft/yr):

CNTRL DEV: None

(included in Unit 2-5027 throughput)

Installed: 1956

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-02			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmctf)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	3	0	0.0371	0.8914	0.1627	0.0371	0.1627	#DIV/O!	0.039	0.17	0.0000	0.0000
PM10	3	0	0.0371	0.8914	0.1627	0.0371	0.1627	#DIV/O!			0.0000	0.0000
SOx	0.6	0	0.0074	0.1783	0.0325	0.0074	0.0325	N/A	0.007	0.033	0.0000	0.0000
NOx	140	0	1.7333	41.6000	7.5920	1.7333	7.5920	N/A			0.0000	0.0000
VOC	2.8	0	0.0347	0.8320	0.1518	0.0347	0.1518	N/A			0.0000	0.0000
CO	35	0	0.4333	10.4000	1.8980	0.4333	1.8980	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

Used to heat up whole bars prior to coiling.

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Unit ID: Nine (9) Spring Grinders

Coil Spring Grinder (Unit No. 3-0247)

MDR (T/hr): 0.909
YEARLY PROD (T/yr): 7,719

STACK ID (DIAM:HEIGHT): (4: 50)

FLOWRATE (ACFM): 93620

CNTRL DEV: Baghouse (Unit No. 3-3037)

Installation 1961

_P Range: 5 - 6 inches of water

(For all 9 combined)

Ts(°F): 77

PERMITTED OPERATING HRS: 8760 hr/yr

_P Range: 5 - 6 inches of water			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
SCC NO. 3-03-009-12			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/Ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			(lbs/hr)	(TPY)
PM	16.25	99.996	14.7713	354.5100	64.6981	0.0006	0.0026	0.0000	0.03	0.13	62.7169	0.0025
PM10	9.128	99.996	8.2974	199.1364	36.3424	0.0003	0.0015	0.0000			35.2295	0.0014
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

Manufacturer: Torrington (Model No. None; Serial No. 48640)

326 IAC 6-1-10.1(d): 0.019 lbs/ton

EF based on Stack Test performed on January 10 & 11, 1996.

All nine grinders are vented through one baghouse.

Baghouse: ETA 2000 Model 1365 Pulse-jet unit with 120 polyester bags for a total filtering area of 8,480 sq. ft.

6/16/94: Rotoclone DC 3-3020 replaced w/ new Baghouse.

Appendix A: Emissions Calculations

Coil Spring Grinder (Unit No. 3-0249)

MDR (T/hr): 0.1545

STACK ID (DIAM:HEIGHT): (4: 50)

Manufacturer: Gardner (Model No. 120-A-30; Serial No. 120A131)

YEARLY PROD (T/yr): (Covered by above)

FLOWRATE (ACFM): 93620

CNTRL DEV: Baghouse (Unit No. 3-3037)

Ts(°F): 77

Installation 1948

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 3-03-009-12			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
			POLLUTANT	EF (lbs/Ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)
PM	16.25	99.996	2.5106	60.2550	10.9965	0.0001	0.0004	0.0000	1.82	7.97	#VALUE!	#VALUE!
PM10	9.128	99.996	1.4103	33.8466	6.1770	0.0001	0.0002	0.0000			#VALUE!	#VALUE!
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

6/16/94: Rotoclone DC 3-0237 replaced w/ new Baghouse.

326 IAC 6-1-10.1(d): 3.792 lbs/ton

Coil Spring Grinder (Unit No. 3-0386)

MDR (T/hr): 1.6555

STACK ID (DIAM:HEIGHT): (4: 50)

and Tub Grinder (No. 3-0389)

YEARLY PROD (T/yr): (Covered by above)

FLOWRATE (ACFM): 93620

CNTRL DEV: Baghouse (Unit No. 3-3037)

Ts(°F): 77

PERMITTED OPERATING HRS: **8760** hr/yr

SCC NO. 3-03-009-12			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
			POLLUTANT	EF (lbs/Ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)
PM	16.25	99.996	26.9019	645.6450	117.8302	0.0011	0.0047	0.0000	0.045	0.20	#VALUE!	#VALUE!
PM10	9.128	99.996	15.1114	362.6737	66.1879	0.0006	0.0026	0.0000			#VALUE!	#VALUE!
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

6/16/94: Rotoclone DC 3-3031 replaced w/ new Baghouse.

326 IAC 6-1-10.1(d): 1.083 lbs/ton

Unit 3-0386: Manufacturer: Besly-Wells (Model No. 253; Serial No. 23572030); Installation Date: 1979; MDC = 2222 lbs/hr.

Unit 3-0389: Manufacturer: Gardner (Model No. 124; Serial No. None); Installation Date: 1980; MDC = 1089 lbs/hr.

Appendix A: Emissions Calculations

Coil Spring Grinders (Units No. 3-0244 and 3-0393)

MDR (T/hr): 4.309
YEARLY PROD (T/yr): (Covered by above)

STACK ID (DIAM:HEIGHT): (4: 50)
FLOWRATE (ACFM): 93620
Ts(°F): 77

CNTRL DEV: Baghouse (Unit No. 3-3037)

SCC NO. 3-03-009-12			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1997 ACTUAL	
			POTENTIAL EMISSIONS									
			BEFORE CONTROLS			AFTER CONTROLS						
POLLUTANT	EF(lbs/Ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	16.25	99.996	70.0213	1,680.5100	306.6931	0.0028	0.0123	0.0000	0.040	0.175	#VALUE!	#VALUE!
PM10	9.128	99.996	39.3326	943.9812	172.2766	0.0016	0.0069	0.0000			#VALUE!	#VALUE!
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

326 IAC 6-1-10.1(d): 0.021 lbs/ton

Unit 3-0244: Manufacturer: Mattison (Model No. 900-SS; Serial No. 900-SS-102); Installation Date: 1960; MDR = 4,309 lbs/hr.

Unit 3-0393: Manufacturer: Mattison (Model No. 900; Serial No. 900-47); Installation Date: 1991; MDC = 4,309 lbs/hr.

4/5/91: Besly Grinder (3-0262) replaced with Mattison Grinder (3-0393).

6/16/94: Rotoclone DC 3-3033 replaced w/ new Baghouse.

Coil Spring Grinders (Units No. 3-0385, 3-0394, and 3-0233)

MDR (T/hr): 2.2035
YEARLY PROD (T/yr): (Covered by above)

STACK ID (DIAM:HEIGHT): (4: 50)
FLOWRATE (ACFM): 93620
Ts(°F): 77

CNTRL DEV: Baghouse (Unit No. 3-3037)

SCC NO. 3-03-009-12			PERMITTED OPERATING HRS: 8760 hr/yr						ALLOWABLE		1997 ACTUAL	
			POTENTIAL EMISSIONS									
			BEFORE CONTROLS			AFTER CONTROLS					(lbs/hr)	(TPY)
POLLUTANT	EF(lbs/Ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	16.25	99.996	35.8069	859.3650	156.8341	0.0014	0.0063	0.0000	0.15	0.66	#VALUE!	#VALUE!
PM10	9.128	99.996	20.1135	482.7252	88.0973	0.0008	0.0035	0.0000			#VALUE!	#VALUE!
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

326 IAC 6-1-10.1(d): 0.019 lbs/ton (each)

Unit 3-0385: Manufacturer: Besly-Wells (Model No. 55-25-05; Serial No. 253-72-028); Installation Date: 1976; MDR = 3098 lbs/hr.

Unit 3-0394: Manufacturer: Besly MDC = 703 lbs/hr.

Unit 3-0233: Manufacturer: Gardner (Model No. Single End; Serial No. 9618); Installation Date: 1939; MDC = 606 lbs/hr.

6/16/94: Rotoclone DC replaced w/ new Baghouse.

1/27/95: Tub Grinder (No. 3-0388) not tied to this dust collector. Moved to another plant.

Stack Test: 2/16/90: Unit 3-0385. #516391 springs at 60 pieces per hour. PM (avg) = 7.802 lbs/hr; PM10 (avg) = 4.487 lbs/hr.

Appendix A: Emissions Calculations

MDR (for all grinder combined) =

9.2315 T/hr

Stack Test: Coil Spring Grinders Dust Collector (3-3037): 1/10 & 11/96: PM10 (avg) = 0.1688 lbs/hr. RM 201A.

Totals: Nine (9) Spring Grinders

POTENTIAL EMISSIONS				ALLOWABLE				1997 ACTUAL		
BEFORE CONTROLS			AFTER CONTROLS					BEFORE CONTROLS	AFTER CONTROLS	
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)		
PM	150.0119	3,600.2850	657.0520	0.0060	0.0263	0.0000	2.0850	9.1323	62.7169	0.0025
PM10	84.2651	2,022.3632	369.0813	0.0034	0.0148	0.0000			35.2295	0.0014
SOx	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000
NOx	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000
VOC	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000
CO	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

Appendix A: Emissions Calculations

Unit ID: Large Line Coil Spring Manufacturing Process

Quench Tank 3-2845

Manufacturer: Industrial Combustion

CNTRL DEV: Electrostatic Precipitator (No. 3-3028)

Installation 1959

MDR (T/hr): 5

YEARLY PROD (T/yr): 3,693

STACK ID (DIAM:HEIGHT): (3: 35)

FLOWRATE (ACFM): 12000

Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-04-022-10			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/Ton)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	7	98	35.0000	840.0000	153.3000	0.7000	3.0660	0.0072
PM10	7	98	35.0000	840.0000	153.3000	0.7000	3.0660	0.0072
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

Based on mass balance by source using quench oil consumed and tonnage throughput, 7 lbs/ton of spring was determined.

1997 ACTUAL	
BEFORE CONTROLS	AFTER CONTROLS
12.9255	0.2585
12.9255	0.2585
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000

In-process Fuel Usage, Draw Furnace 2-5164

(Natural Gas Combustion)

Stress relieve newly coiled springs

CNTRL DEV: None

MDC (mmBtu/hr): 9.8

MDR (mmcft/hr): 0.0093

HEAT CONTENT (Btu/cft): 1,050

QTY BURNED (mmcft/yr): 7.84

STACK ID (DIAM:HEIGHT): (3: 35)

FLOWRATE (ACFM): 12000

Ts(°F): 100

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-04-900-03			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
POLLUTANT	EF(lbs/MMcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
PM	3	0	0.0280	0.6720	0.1226	0.0280	0.1226	0.0003
PM10	3	0	0.0280	0.6720	0.1226	0.0280	0.1226	0.0003
SOx	0.6	0	0.0056	0.1344	0.0245	0.0056	0.0245	N/A
NOx	140	0	1.3067	31.3600	5.7232	1.3067	5.7232	N/A
VOC	2.8	0	0.0261	0.6272	0.1145	0.0261	0.1145	N/A
CO	35	0	0.3267	7.8400	1.4308	0.3267	1.4308	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1997 ACTUAL	
BEFORE CONTROLS	AFTER CONTROLS
0.0118	0.0118
0.0118	0.0118
0.0024	0.0024
0.5488	0.5488
0.0110	0.0110
0.1372	0.1372
0.0000	0.0000

Appendix A: Emissions Calculations

Totals: Large Line Coil Spring Manufacturing Process										
POTENTIAL EMISSIONS							ALLOWABLE		1997 ACTUAL	
BEFORE CONTROLS			AFTER CONTROLS							
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
PM	35.0280	840.6720	153.4226	0.7280	3.1886	0.0075	3.50	15.33	12.9373	0.2703
PM10	35.0280	840.6720	153.4226	0.7280	3.1886	0.0075			12.9373	0.2703
SOx	0.0056	0.1344	0.0245	0.0056	0.0245	#VALUE!			0.0024	0.0024
NOx	1.3067	31.3600	5.7232	1.3067	5.7232	#VALUE!			0.5488	0.5488
VOC	0.0261	0.6272	0.1145	0.0261	0.1145	#VALUE!			0.0110	0.0110
CO	0.3267	7.8400	1.4308	0.3267	1.4308	#VALUE!			0.1372	0.1372
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.700 lbs/ton

Appendix A: Emissions Calculations

Unit ID: Medium Line Coil Spring Manufacturing Process

Quench Tank 3-2838

MDR (T/hr): 3

STACK ID (DIAM:HEIGHT): (3: 35)

Manufacturer: Holcroft; Model No. C-188; Serial No. None

YEARLY PROD (T/yr): 2,379

FLOWRATE (ACFM): 12000

CNTRL DEV: Electrostatic Precipitator (No. 3-3027)

Ts(°F): 100

Installation 1956

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-04-022-10			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
POLLUTANT	EF(lbs/Ton)	CE (%)						
PM	7	98	21.0000	504.0000	91.9800	0.4200	1.8396	0.0043
PM10	7	98	21.0000	504.0000	91.9800	0.4200	1.8396	0.0043
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1997 ACTUAL	
BEFORE CONTROLS	AFTER CONTROLS
8.3265	0.1665
8.3265	0.1665
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000

Based on mass balance by source using quench oil consumed and tonnage throughput, 7 lbs/ton of spring was determined.

In-process Fuel Usage, Draw Furnace 2-5097

MDC (mmBtu/hr): 5.1

HEAT CONTENT (Btu/cft): 1,050

STACK ID (DIAM:HEIGHT): (3: 35)

(Natural Gas Combustion)

MDR (mmcft/hr): 0.0049

QTY BURNED (mmcft/yr): 15.94

FLOWRATE (ACFM): 12000

Stress relieve newly coiled springs

Ts(°F): 100

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-04-900-03			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
POLLUTANT	EF(lbs/MMcft)	CE (%)						
PM	3	0	0.0146	0.3497	0.0638	0.0146	0.0638	0.0001
PM10	3	0	0.0146	0.3497	0.0638	0.0146	0.0638	0.0001
SOx	0.6	0	0.0029	0.0699	0.0128	0.0029	0.0128	N/A
NOx	140	0	0.6800	16.3200	2.9784	0.6800	2.9784	N/A
VOC	2.8	0	0.0136	0.3264	0.0596	0.0136	0.0596	N/A
CO	35	0	0.1700	4.0800	0.7446	0.1700	0.7446	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1997 ACTUAL	
BEFORE CONTROLS	AFTER CONTROLS
0.0239	0.0239
0.0239	0.0239
0.0048	0.0048
1.1158	1.1158
0.0223	0.0223
0.2790	0.2790
0.0000	0.0000

Appendix A: Emissions Calculations

Totals: Medium Line Coil Spring Manufacturing Process

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	21.0146	504.3497	92.0438	0.4346	1.9034	0.0045	2.10	9.20	8.3504	0.1904
PM10	21.0146	504.3497	92.0438	0.4346	1.9034	0.0045			8.3504	0.1904
SOx	0.0029	0.0699	0.0128	0.0029	0.0128	#VALUE!			0.0048	0.0048
NOx	0.6800	16.3200	2.9784	0.6800	2.9784	#VALUE!			1.1158	1.1158
VOC	0.0136	0.3264	0.0596	0.0136	0.0596	#VALUE!			0.0223	0.0223
CO	0.1700	4.0800	0.7446	0.1700	0.7446	#VALUE!			0.2790	0.2790
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.700 lbs/ton

Appendix A: Emissions Calculations

Unit ID: Small Line Coil Spring Manufacturing Process

Quench Tank 3-2821

MDR (T/hr): 1.5

STACK ID (DIAM:HEIGHT): (3: 35)

Manufacturer: Industrial Combustion

YEARLY PROD (T/yr): 1,647

FLOWRATE (ACFM): 12000

CNTRL DEV: Electrostatic Precipitator (No. 3-3024)

Ts(°F): 100

Installation 1973

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-04-022-10			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
POLLUTANT	EF(lbs/Ton)	CE (%)						
PM	7	98	10.5000	252.0000	45.9900	0.2100	0.9198	0.0022
PM10	7	98	10.5000	252.0000	45.9900	0.2100	0.9198	0.0022
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

Based on mass balance by source using quench oil consumed and tonnage throughput, 7 lbs/ton of spring was determined.

1997 ACTUAL	
BEFORE CONTROLS	AFTER CONTROLS
5.7645	0.1153
5.7645	0.1153
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000
0.0000	0.0000

In-process Fuel Usage, Draw Furnace 2-5163

MDC (mmBtu/hr): 5.1

HEAT CONTENT (Btu/cft): 1,050

STACK ID (DIAM:HEIGHT): (3: 35)

(Natural Gas Combustion)

MDR (mmcft/hr): 0.0049

QTY BURNED (mmcft/yr): 14.51

FLOWRATE (ACFM): 12000

CNTRL DEV: None

Ts(°F): 100

Installed: (See Below)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-04-900-03			POTENTIAL EMISSIONS					
			BEFORE CONTROLS			AFTER CONTROLS		
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)
POLLUTANT	EF(lbs/MMcft)	CE (%)						
PM	3	0	0.0146	0.3497	0.0638	0.0146	0.0638	0.0001
PM10	3	0	0.0146	0.3497	0.0638	0.0146	0.0638	0.0001
SOx	0.6	0	0.0029	0.0699	0.0128	0.0029	0.0128	N/A
NOx	140	0	0.6800	16.3200	2.9784	0.6800	2.9784	N/A
VOC	2.8	0	0.0136	0.3264	0.0596	0.0136	0.0596	N/A
CO	35	0	0.1700	4.0800	0.7446	0.1700	0.7446	N/A
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A

1997 ACTUAL	
BEFORE CONTROLS	AFTER CONTROLS
0.0218	0.0218
0.0218	0.0218
0.0044	0.0044
1.0157	1.0157
0.0203	0.0203
0.2539	0.2539
0.0000	0.0000

Appendix A: Emissions Calculations

Totals: Small Line Coil Spring Manufacturing Process										
POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	10.5146	252.3497	46.0538	0.2246	0.9836	0.0023	0.02	0.09	5.7863	0.1371
PM10	10.5146	252.3497	46.0538	0.2246	0.9836	0.0023			5.7863	0.1371
SOx	0.0029	0.0699	0.0128	0.0029	0.0128	#VALUE!			0.0044	0.0044
NOx	0.6800	16.3200	2.9784	0.6800	2.9784	#VALUE!			1.0157	1.0157
VOC	0.0136	0.3264	0.0596	0.0136	0.0596	#VALUE!			0.0203	0.0203
CO	0.1700	4.0800	0.7446	0.1700	0.7446	#VALUE!			0.2539	0.2539
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.014 lbs/ton

Appendix A: Emissions Calculations

Unit ID: Sellers Boiler No. 4-5509

(Model No. None; Serial No. S092562)

(Natural Gas Combustion)

CNTRL DEV: None

Installed: 1978

MDC (mmBtu/hr): 10.5

MDR (mmcf/hr): 0.0100

HEAT CONTENT (Btu/cft): 1,050

QTY BURNED (mmcf/yr): 11.55

STACK ID (DIAM:HEIGHT): (2: 40)

FLOWRATE (ACFM): 2958

Ts(°F): 350

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-02			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	3	0	0.0300	0.7200	0.1314	0.0300	0.1314	0.0018	0.030	0.131	0.0173	0.0173
PM10	3	0	0.0300	0.7200	0.1314	0.0300	0.1314	0.0018			0.0173	0.0173
SOx	0.6	0	0.0060	0.1440	0.0263	0.0060	0.0263	N/A			0.0035	0.0035
NOx	140	0	1.4000	33.6000	6.1320	1.4000	6.1320	N/A			0.8085	0.8085
VOC	2.8	0	0.0280	0.6720	0.1226	0.0280	0.1226	N/A			0.0162	0.0162
CO	35	0	0.3500	8.4000	1.5330	0.3500	1.5330	N/A	14.4	62.9	0.2021	0.2021
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Unit ID: Spray Painting Operation

Booths 3-2714 and 3-2715 (High Pressure Air-Assisted Airless)

(Calculations based on worst-case coating)

MDR based on the combined usage rates.

CNTRL DEV: Dry Filters

Installation: 1989

MDR (gal/hr): 4.1

YEARLY PROD (gal/yr): 664

(Combined for Units 3-2714 & 2715)

STACK ID (DIAM:HEIGHT): (2: 30)

FLOWRATE (ACFM): 5200

Ts(°F): 70

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 4-02-002-01			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF(lbs/gal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	0.4275	98	1.7528	42.0660	7.6770	0.0351	0.1535	#DIV/O!	14.4	62.9	0.1418	0.0028
PM10	0.21375	98	0.8764	21.0330	3.8385	0.0175	0.0768	#DIV/O!			0.0709	0.0014
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	3.5	0	14.3500	344.4000	62.8530	14.3500	62.8530	N/A			1.1611	1.1611
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	14.4	62.9	0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

Overspray: 5% PM; 2.5% PM10

VOC: 326 IAC 8-2-9(d)(2): 3.5 lbs/gal less H2O

and NPR solvents.

Units Painted: Unit 3-2715 (Slider Assemblies), Unit 3-2714 (Coil Springs)

Coating Used: Booth 3-2714: John Deere Greene (density = 8.55 lbs/gal; 2.82 lbs VOC/gal less water). Max coating Usage = 0.10 gal/hr.

Tan (density = 9.29 lbs/gal; 2.63 lbs VOC/gal less water). Max coating Usage = 0.10 gal/hr.

Booth 3-2715: Gloss Black Enamel (density = 8.44 lbs/gal; 3.31 lbs VOC/gal less water). Max Coating Usage = 4.00 gal/hr.

7/3/89: NSR

Appendix A: Emissions Calculations

Unit ID: Spring Coating Dip Tanks

Eleven (11) Dip Tanks

MDR (gal/hr): 11.97

YEARLY PROD (gal/yr): 9,913

MDR based on the combined usage rates.

(Total consumption for 1997 was 25 Tons)

CNTRL DEV: None

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 4-02-002-01			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF (lbs/gal)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			(lbs/hr)	(TPY)
PM	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	#DIV/O!			0.0000	0.0000
PM10	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	#DIV/O!			0.0000	0.0000
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	4.3	0	51.4710	1,235.3040	225.4430	51.4710	225.4430	N/A	51.3	224.9	21.3120	21.3120
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	3.63	0	43.4511	1,042.8264	190.3158	43.4511	190.3158	N/A			17.9913	17.9913

1) Calculations based on worst-case coatings which contain 4.3 lbs/gal.

VOC: 326 IAC 8-2-9(d)(1): 4.3 lbs/gal less H2O

2) MDR based on usage of all Coatings containing VOC/HAP.

(Tank ID)	(Tank Location)	(Coating Used)	and NPR solvents.
3-2813	(Final Inspection Area)	Tectyl 300G Thinned w/ 50% Glycol Ether and 50% water at ratio of 1:7 (solvent/paint). (density = 8.29 lbs/gal; 3.63 lbs VOC/gal). Max Coating Usage = 1.87 gal/hr. 15.5023 lbs/hr.	
3-2865	(Final Inspection Area)	Tectyl 300G Thinned w/ 50% Glycol Ether and 50% water at ratio of 1:7 (solvent/paint). (density = 8.29 lbs/gal; 3.63 lbs VOC/gal). Max Coating Usage = 1.87 gal/hr. 15.5023 lbs/hr.	
3-2865A	γ Medium Spring Line)	Tectyl 300G Thinned w/ 50% Glycol Ether and 50% water at ratio of 1:7 (solvent/paint). (density = 8.29 lbs/gal; 3.63 lbs VOC/gal). Max Coating Usage = 2.15 gal/hr. 17.8235 lbs/hr.	
3-2867	(By Torrington Grinder; 200 gal)	Tectyl 300G Thinned w/ 50% Glycol Ether and 50% water at ratio of 1:7 (solvent/paint). (density = 8.29 lbs/gal; 3.63 lbs VOC/gal). Max Coating Usage = 1.74 gal/hr. 14.4246 lbs/hr.	
3-2869	(By Torrington Grinder; 100 gal)	NOX RUST X-110 thinned w/ Kwik-Dry 66 at ratio of 1:1. (density = 6.86 lbs/gal; 4.3 lbs VOC/gal). Max Coating Usage = 0.84 gal/hr. 5.7624 lbs/hr.	
3-2870	(NE Corner of Plant; 165 gal)	Tectyl 300G Thinned w/ 50% Glycol Ether and 50% water at ratio of 1:7 (solvent/paint). (density = 8.29 lbs/gal; 3.63 lbs VOC/gal). Max Coating Usage = 1.70 gal/hr. 14.093 lbs/hr.	
3-2871	(NE Corner of Plant; 170 gal)	NOX RUST X-110 thinned w/ Kwik-Dry 66 at ratio of 1:1. (density = 6.86 lbs/gal; 4.3 lbs VOC/gal). Max Coating Usage = 1.77 gal/hr. 12.1422 lbs/hr.	
3-2873	(Fabrication Dept.; 170 gal)	NOX RUST X-110 thinned w/ Kwik-Dry 66 at ratio of 1:10 (solvent/paint). (density = 7.26 lbs/gal; 3.68 lbs VOC/gal). Max Coating Usage = 0.03 gal/hr. 0.2178 lbs/hr.	
3-2874	(Fabrication Dept.; 170 gal)	Quench Oil. (density = 7.26 lbs/gal). (No VOC) Max Coating Usage = 0.30 gal/hr.	
3-2868	(By Torrington Grinder; 120 gal)	Quench Oil. (density = 7.26 lbs/gal). (No VOC) Max Coating Usage = 2.50 gal/hr.	
3-2872	(NE Corner of Plant; 170 gal)	Quench Oil. (density = 7.26 lbs/gal). (No VOC) Max Coating Usage = 2.50 gal/hr.	

Total Consumption 1997: Solvent-Based = 9 Tons; Water-based = 25 Tons.

Glycol Ether used to thin Tectyl 300G is 100% VOC and a HAP. Thus, the HAPs EF = (3.63 lbs VOC/gal) x (1 lb Glycol Ether/8 lbs coating) / (8.29 lbs coating/gal) *2000
= 109.469 lbs/ton

Appendix A: Emissions Calculations

**** SOURCE TOTALS w/o Insignificant Act: ASF-Keystone, Inc. - Hammond Plant ****

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	218.4475	5,242.7396	956.8000	1.5539	6.8061	#DIV/O!	0.0000	0.0000	90.0089	0.6794
PM10	151.8244	3,643.7847	664.9907	1.5338	6.7178	#DIV/O!	7.8370	34.3261	62.4507	0.6769
SOx	0.0366	0.8777	0.1602	0.0366	0.1602	#VALUE!	0.0251	0.1101	0.0267	0.0267
NOx	8.5333	204.8000	37.3760	8.5333	37.3760	#VALUE!	0.0000	0.0000	6.2412	6.2412
VOC	65.9917	1,583.8000	289.0435	65.9917	289.0435	#VALUE!	65.6920	287.7310	22.5979	22.5979
CO	2.1333	51.2000	9.3440	2.1333	9.3440	#VALUE!	0.0000	0.0000	1.5603	1.5603
HAPs	43.4511	1,042.8264	190.3158	43.4511	190.3158	#VALUE!	0.0000	0.0000	17.9913	17.9913

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Appendix A: Emissions Calculations

**** Deleted by ASF in correspondence dated 3/20/96****

Miscellaneous Line Coil Spring Manufacturing Process: Draw Furnace No. 2-5131, oil quench tank No. 3-2818, and ESP No. 3-3026 rated at 98% CE.

Walking Beam Furnace No. 2-5181: 7.5 MMBtu/hr heat input; NG only.

**** Insignificant Activities****

- 1) Space Heaters, process heaters, or boilers using the following fuels.
 - A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- 2) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- 3) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brasing equipment, cutting torches, soldering equipment, welding equipment.
- 4) Quenching operations used with heat treating processes.
- 5) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- 6) Paved and unpaved roads and parking lots with public access.

Appendix A: Emissions Calculations

Unit ID: Large Slot Furnace (Unit ID 2-5036)

(Natural Gas Combustion)

CNTRL DEV: None

MDC (mmBtu/hr): 2.5

MDR (mmcf/hr): 0.0024

HEAT CONTENT (Btu/cft): 1,050

QTY BURNED (mmcf/yr): (included in Unit 2-5027 throughput)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-03			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	12	0	0.0286	0.6857	0.1251	0.0286	0.1251	#DIV/O!	0.0075	0.03	#VALUE!	#VALUE!
PM10	12	0	0.0286	0.6857	0.1251	0.0286	0.1251	#DIV/O!			#VALUE!	#VALUE!
SOx	0.6	0	0.0014	0.0343	0.0063	0.0014	0.0063	N/A	0.001	0.006	#VALUE!	#VALUE!
NOx	100	0	0.2381	5.7143	1.0429	0.2381	1.0429	N/A			#VALUE!	#VALUE!
VOC	5.3	0	0.0126	0.3029	0.0553	0.0126	0.0553	N/A			#VALUE!	#VALUE!
CO	21	0	0.0500	1.2000	0.2190	0.0500	0.2190	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

Insignificant: emissions below insignificant levels.

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Unit ID: Small Slot Furnace (Unit ID 2-5006)

(Natural Gas Combustion)

CNTRL DEV: None

MDC (mmBtu/hr): 1.5

MDR (mmcf/hr): 0.0014

HEAT CONTENT (Btu/cft): 1,050

QTY BURNED (mmcf/yr): (included in Unit 2-5027 throughput)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-03			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	12	0	0.0171	0.4114	0.0751	0.0171	0.0751	#DIV/O!	0.0045	0.02	#VALUE!	#VALUE!
PM10	12	0	0.0171	0.4114	0.0751	0.0171	0.0751	#DIV/O!			#VALUE!	#VALUE!
SOx	0.6	0	0.0009	0.0206	0.0038	0.0009	0.0038	N/A	0.001	0.004	#VALUE!	#VALUE!
NOx	100	0	0.1429	3.4286	0.6257	0.1429	0.6257	N/A			#VALUE!	#VALUE!
VOC	5.3	0	0.0076	0.1817	0.0332	0.0076	0.0332	N/A			#VALUE!	#VALUE!
CO	21	0	0.0300	0.7200	0.1314	0.0300	0.1314	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

Insignificant: emissions below insignificant levels.

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Appendix A: Emissions Calculations

Unit ID: Small Screw Furnace (Unit ID 2-5085)

(Natural Gas Combustion)
CNTRL DEV: None

MDC (mmBtu/hr): 8
MDR (mmcf/hr): 0.0076

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmcf/yr): (included in Unit 2-5027 throughput)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-02			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	12	0	0.0914	2.1943	0.4005	0.0914	0.4005	#DIV/O!	0.024	0.11	#VALUE!	#VALUE!
PM10	12	0	0.0914	2.1943	0.4005	0.0914	0.4005	#DIV/O!			#VALUE!	#VALUE!
SOx	0.6	0	0.0046	0.1097	0.0200	0.0046	0.0200	N/A			#VALUE!	#VALUE!
NOx	100	0	0.7619	18.2857	3.3371	0.7619	3.3371	N/A			#VALUE!	#VALUE!
VOC	5.3	0	0.0404	0.9691	0.1769	0.0404	0.1769	N/A			#VALUE!	#VALUE!
CO	21	0	0.1600	3.8400	0.7008	0.1600	0.7008	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

Insignificant: emissions below insignificant levels.

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Unit ID: Slot Furnaces (Medium Line) (Unit IDs 2-5014 & 2-5015)

(Natural Gas Combustion)
CNTRL DEV: None

MDC (mmBtu/hr): 2.6
MDR (mmcf/hr): 0.0025

HEAT CONTENT (Btu/cft): 1,050
QTY BURNED (mmcf/yr): (included in Unit 2-5027 throughput)

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 1-02-006-02			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
POLLUTANT	EF(lbs/mmcf)	CE (%)	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	12	0	0.0297	0.7131	0.1301	0.0297	0.1301	#DIV/O!	0.008	0.04	#VALUE!	#VALUE!
PM10	12	0	0.0297	0.7131	0.1301	0.0297	0.1301	#DIV/O!			#VALUE!	#VALUE!
SOx	0.6	0	0.0015	0.0357	0.0065	0.0015	0.0065	N/A			#VALUE!	#VALUE!
NOx	100	0	0.2476	5.9429	1.0846	0.2476	1.0846	N/A			#VALUE!	#VALUE!
VOC	5.3	0	0.0131	0.3150	0.0575	0.0131	0.0575	N/A			#VALUE!	#VALUE!
CO	21	0	0.0520	1.2480	0.2278	0.0520	0.2278	N/A			#VALUE!	#VALUE!
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			#VALUE!	#VALUE!

Insignificant: emissions below insignificant levels.

PM10: 326 IAC 6-1-10.1(h): 0.003 lbs/MMBtu

SO2 emissions are limited to 0.3 lbs/MMBtu

in accordance with 326 IAC 7-4-1.1(b), however,
326 IAC 6-1-10.1(h) requires natural gas combustion only.
Thus, the more stringent limitation for SO2 emissions
inherent with natural gas combustion is the allowable.

Appendix A: Emissions Calculations

Unit ID: Pangborn Shot Peener (No. 3-1804)

Manufacturer: Pangborn

MDR (T/hr): 0.011

STACK ID (DIAM:HEIGHT): (1: 30)

Model No. C20-Type CM; Serial No. None

YEARLY PROD (T/yr): 9.5

FLOWRATE (ACFM): 5170

CNTRL DEV: Bag Collector No. 3-3017

Ts(°F): 77

Installation 1964

PERMITTED OPERATING HRS: 8760 hr/yr

_P Range: 1.5 - 2.0 inches of water

SCC NO. 3-09-002-05

POLLUTANT	EF (lbs/Ton)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	8	97.5	0.0880	2.1120	0.3854	0.0022	0.0096	0.0001	0.06	0.26	0.0380	0.0010
PM10	5.6	97.5	0.0616	1.4784	0.2698	0.0015	0.0067	0.0000			0.0266	0.0007
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.011 lbs/ton

EF obtained from the Air Quality Permits Handbook, Table 3.2. Steel Shots EF = 0.004 lbs PM/lb of Abrasive used. PM10 emissions assumed to be 70% of PM.

Insignificant: PM emissions less than 5 lbs/hr and 25 lbs/day.

Unit ID: Wheelabrator Shot Peener (No. 3-1821)

Manufacturer: Wheelabrator

MDR (T/hr): 0.008

STACK ID (DIAM:HEIGHT): (3: 35)

Model 28CFTurnblast; Serial No. A126609

YEARLY PROD (T/yr): 10.1

FLOWRATE (ACFM): 7143

CNTRL DEV: Bag Collector No. 3-3022

Ts(°F): 100

Installation: 1972

PERMITTED OPERATING HRS: 8760 hr/yr

_P Range: 1.5 - 2.0 inches of water

SCC NO. 3-09-002-05

POLLUTANT	EF (lbs/Ton)	CE (%)	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
PM	8	97.5	0.0640	1.5360	0.2803	0.0016	0.0070	0.0000	0.06	0.26	0.0404	0.0010
PM10	5.6	97.5	0.0448	1.0752	0.1962	0.0011	0.0049	0.0000			0.0283	0.0007
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.016 lbs/ton

EF obtained from the Air Quality Permits Handbook, Table 3.2. Steel Shots EF = 0.004 lbs PM/lb of Abrasive used. PM10 emissions assumed to be 70% of PM.

Insignificant: PM emissions less than 5 lbs/hr and 25 lbs/day.

Appendix A: Emissions Calculations

Unit ID: Wheelabrator Shot Peener (No. 3-1811)

Manufacturer: Wheelabrator

Model 112; Serial No. A85613

CNTRL DEV: Bag Collector No. 3-1811

Installation 1951

_P Range: 1.5 - 2.0 inches of water

MDR (T/hr): 0.008

YEARLY PROD (T/yr): 14.7

STACK ID (DIAM:HEIGHT): (1: 20)

FLOWRATE (ACFM): 3000

Ts(°F): 60

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-09-002-05			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
POLLUTANT	EF (lbs/Ton)	CE (%)										
PM	8	97.5	0.0640	1.5360	0.2803	0.0016	0.0070	0.0001	0.06	0.26	0.0588	0.0015
PM10	5.6	97.5	0.0448	1.0752	0.1962	0.0011	0.0049	0.0000			0.0412	0.0010
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.018 lbs/ton

EF obtained from the Air Quality Permits Handbook, Table 3.2. Steel Shots EF = 0.004 lbs PM/lb of Abrasive used. PM10 emissions assumed to be 70% of PM.

Unit ID: Wheelabrator Shot Peener (No. 3-1823)

Manufacturer: Wheelabrator

Model 28CFTurnblast; Serial No. A133341

CNTRL DEV: Bag Collector No. 3-1823

MDR (T/hr): 0.008

YEARLY PROD (T/yr): 16.7

STACK ID (DIAM:HEIGHT): (1: 30)

FLOWRATE (ACFM): 4000

Ts(°F): 77

PERMITTED OPERATING HRS: 8760 hr/yr

SCC NO. 3-09-002-05			POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE CONTROLS	AFTER CONTROLS
			(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)				
POLLUTANT	EF (lbs/Ton)	CE (%)										
PM	8	97.5	0.0640	1.5360	0.2803	0.0016	0.0070	0.0000	0.06	0.26	0.0668	0.0017
PM10	5.6	97.5	0.0448	1.0752	0.1962	0.0011	0.0049	0.0000			0.0468	0.0012
SOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
NOx	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
VOC	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
CO	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000
HAPs	0	0	0.0000	0.0000	0.0000	0.0000	0.0000	N/A			0.0000	0.0000

PM10: 326 IAC 6-1-10.1(d): 0.016 lbs/ton

EF obtained from the Air Quality Permits Handbook, Table 3.2. Steel Shots EF = 0.004 lbs PM/lb of Abrasive used. PM10 emissions assumed to be 70% of PM.

Insignificant: PM emissions less than 5 lbs/hr and 25 lbs/day.

Appendix A: Emissions Calculations
**** TOTALS: Insignificant Activities: ASF-Keystone, Inc. - Hammond Plant ****

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE	AFTER
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			CONTROLS	CONTROLS
PM	0.4469	10.7246	1.9572	0.1739	0.7615	#DIV/O!	0.0000	0.0000	0.2040	0.0051
PM10	0.3629	8.7086	1.5893	0.1718	0.7523	#DIV/O!	0.2840	1.2439	0.1428	0.0036
SOx	0.0083	0.2002	0.0365	0.0083	0.0365	#VALUE!	0.0083	0.0365	0.0000	0.0000
NOx	1.3905	33.3714	6.0903	1.3905	6.0903	#VALUE!	0.0000	0.0000	0.0000	0.0000
VOC	0.0737	1.7687	0.3228	0.0737	0.3228	#VALUE!	0.0000	0.0000	0.0000	0.0000
CO	0.2920	7.0080	1.2790	0.2920	1.2790	#VALUE!	0.0000	0.0000	0.0000	0.0000
HAPs	0.0000	0.0000	0.0000	0.0000	0.0000	#VALUE!	0.0000	0.0000	0.0000	0.0000

Appendix A: Emissions Calculations
 ** SOURCE TOTALS w/ Insignificant Act: ASF-Keystone, Inc. - Hammond Plant **

POLLUTANT	POTENTIAL EMISSIONS						ALLOWABLE		1997 ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS			(lbs/hr)	(TPY)	BEFORE	AFTER
	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)			CONTROLS	CONTROLS
PM	218.8943	5,253.4641	958.7572	1.7278	7.5676	#DIV/O!	0.0000	0.0000	90.2129	0.6845
PM10	152.1872	3,652.4933	666.5800	1.7055	7.4701	#DIV/O!	8.1210	35.5700	62.5935	0.6805
SOx	0.0449	1.0779	0.1967	0.0449	0.1967	#VALUE!	0.0335	0.1467	0.0267	0.0267
NOx	9.9238	238.1714	43.4663	9.9238	43.4663	#VALUE!	0.0000	0.0000	6.2412	6.2412
VOC	66.0654	1,585.5687	289.3663	66.0654	289.3663	#VALUE!	65.6920	287.7310	22.5979	22.5979
CO	2.4253	58.2080	10.6230	2.4253	10.6230	#VALUE!	0.0000	0.0000	1.5603	1.5603
HAPs	43.4511	1,042.8264	190.3158	43.4511	190.3158	#VALUE!	0.0000	0.0000	17.9913	17.9913

SO2 emissions are limited to 0.3 lbs/MMBtu
 in accordance with 326 IAC 7-4-1.1(b), however,
 326 IAC 6-1-10.1(h) requires natural gas combustion only.
 Thus, the more stringent limitation for SO2 emissions
 inherent with natural gas combustion is the allowable.